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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,033	07/21/2003	James R. Richter	09793953-0039	5119
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SONNENSCHN NATH & ROSENTHAL LLP P.O. BOX 061080 WACKER DRIVE STATION, SEARS TOWER CHICAGO, IL 60606-1080			EXAMINER PRICE, CRAIG JAMES	
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			3753	

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/624,033	RICHTER, JAMES R.	
	Examiner	Art Unit	
	Craig Price	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 24-26 is/are pending in the application.
- 4a) Of the above claim(s) 24-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Applicant's election with traverse of species A (Figures 1-4) in the reply filed on 12 December 2005 is acknowledged. The traversal is on the ground(s) that the specification states that "often times the upstream pipe section 12 comprises an elbow" as being the claimed limitation of "a turbulence reducing device". This is not found persuasive because the elected species, (i.e., the embodiment shown in Figures 1-4 do not show an elbow.

The requirement is still deemed proper and is therefore made FINAL.

Claims 24-26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 12 December 2005.

This application contains claims 24-26 drawn to an invention nonelected with traverse in the paper filed on 12 December 2005. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1,2,4-8,10-12,14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCall (5,363,699) in view of Richter (5,273,321) and Kozyuk (6,012,492).

Regarding Claim 1, McCall discloses a fluid flow stabilizer (10) for use in a flow of fluid in a conduit with a turbulence creating device (col. 4, ll. 42-57), comprising of a fluid conduit section (12) having a first end (20) for mounting the first end to the fluid conduit and a second end (end of flange 16) for mounting the second end to the fluid conduit, the fluid conduit section having a fluid passage therethrough to allow the fluid to

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flow from the first end to the second end as seen in Figure 2, a flow straightening device (36,38) positioned in the fluid conduit section, the flow straightening device (36,38) comprises one or more longitudinally extending vanes as shown in Figure 2, the fluid conduit section has a length (from 20 to the end of flange 16) and an internal diameter, with the length being less than five times the diameter, as shown in Figure 2, the second mounting arrangement comprises a flange with a series of spaced bolt holes extending therethrough (col4, ll. 41-48). McCall lacks, that the fluid conduit section being constructed to absorb at least one of shock, vibration and alignment, and, a fluid control device. Richter teaches the use of a fluid conduit section (11), where the fluid conduit section (11) is constructed to absorb at least one of shock, vibration and alignment (col.1, ll. 5-52 and in col. 4, ll. 3-17). Kozyuk teaches the use of a valve (150) used in a fluid conduit (116) as shown in Figure 2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Richter's teaching onto McCall's fluid conduit section by having the fluid conduit section made of flexible member as taught by Richter in (col. 1, ll. 5-52 and in col. 4, ll. 3-17), in order to provide a flexible conduit section which provides a greater acoustical impedance.

Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the fluid conduit section of McCall and Richter to have the fluid control device as taught by Kozyuk in Figure 2, in order to provide a means of controlling the fluid.

With respect to claim 11, the claimed subject matter, "each vane arranged

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perpendicular to adjacent vanes”.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have each vane arranged perpendicular to adjacent vanes, because applicant has not disclosed that arranging each vane perpendicular to adjacent vanes provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with McCall's vanes (36,38), because McCall's vanes are being used to stabilize the flow (col. 6, ll. 37-51).

Therefore, it would have been an obvious matter of design choice to modify the vanes of McCall, Richter and Kozyuk to obtain the invention specified in claim 11.

4. Claims 3,9 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCall (5,363,699) in view of Richter (5,273,321) and Kozyuk (6,012,492) as applied to claims 1 and 6, and further in view of Rosecrans (4,366,746).

McCall-Richter-Kozyuk in combination have taught all of the features of the claimed invention except that, the fluid conduit section comprises of a flexible metal hose. Rosecrans teaches a flexible metal hose (50), as shown in Figure 2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the conduit section of McCall, Richter and Kozyuk to have the fluid conduit section made of a flexible metal hose as taught by Rosecrans, in order to improve the number of pressure impulse cycles without failure, as shown in Figure 3 and (col. 6, ll. 55-68).

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5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCall (5,363,699) in view of Richter (5,273,321) and Kozyuk (6,012,492), as applied to claim 11, and further in view of Arnaudeau (4,365,932).

McCall-Richter-Kozyuk in combination have taught all of the claimed features except that, the vanes have a hydrodynamic shape. Arnaudeau teaches a flow straightener having thick fins in the hydrodynamic sense (col.6, ll. 44,45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the vanes of McCall, Richter and Kozyuk to have a hydrodynamic shape as taught by Arnaudeau, in order to define the flow of liquid and maximize uniform flow through the channel.

6. Claims 16,20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCall (5,363,699) in view of Kozyuk (6,012,492).

McCall discloses a pipe flow stabilizer for use in a pipeline between a pump (col. 4, ll. 52-55) comprising of a pump connector having a first end (20) with a first mounting arrangement for mounting the first end to the pump, the pump connector having a fluid passage therethrough to allow fluid to flow from the first end (20) to the second end (end of flange 16), and a flow straightening device (36,38) in the pump connector (12) as shown in Figure 2, and a pump connector having an internal diameter of 4 inches (Col. 4, Lns. 58-66). McCall further discloses a pump connector having a linear fluid conduit section with a length being less than five times the diameter (Col. 6, Lns. 42-44), where by this description the conduit section would have an approximate length of 2.5 times the diameter. However even if the drawings do not disclose the limitation, one

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of ordinary skill in the art at the time of invention would have selected a pipe length within this range due to the fact that for the portion of the pipe (12) being used in the rejection, McCall explicitly discloses two vane sets having a length of $\frac{1}{2}$ the diameter of the conduit, where one of ordinary skill in the art at the time of invention would have optimized the length to be less than 5 times the diameter, in order to make the system lighter and for space constraints.

McCall lacks a valve in a pipeline. Kozyuk teaches the use of a valve (150) used in a fluid conduit (116) as shown in Figure 2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the fluid conduit section of McCall to have the fluid control device as taught by Kozyuk in Figure 2, in order to provide a means of controlling the fluid.

7. Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCall (5,363,699) in view of Kozyuk (6,012,492), as applied to claim 16, and further in view of Richter (5,273,321).

McCall-Kozyuk in combination have taught all features of the claimed invention except that, the pump connector is constructed to absorb at least one of shock, vibration and alignment in the pipeline, and comprises an elastomeric material. Richter teaches the use of a fluid conduit section (11), where the fluid conduit section (11) is constructed to absorb at least one of shock, vibration and alignment (col.1, ll. 5-52 and in col. 4, ll. 3-17).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Richter's teaching onto McCall-Kozyuk's pump connector by having the pump connector constructed to absorb at least one of shock, vibration and alignment as taught by Richter in (col. 1, ll. 5-52 and in col. 4, ll. 3-17), in order to provide a pump connector that provides a greater acoustical impedance

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCall (5,363,699) in view of (6,012,492), as applied to claim 16, and further in view of Rosecrans (4,366,746).

McCall and Kozyuk have taught all of the claimed features except that, the pump connector comprises a flexible metal hose. Rosecrans teaches a flexible metal hose (50), as shown in Figure 2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the pump connector of McCall and Kozyuk to have the pump connector made of a flexible metal hose as taught by Rosecrans, in order to improve the number of pressure impulse cycles without failure, as shown in Figure 3 and (col. 6, ll. 55-68).

Response to Arguments

9. Applicant's arguments filed 12 December 2005 have been fully considered but they are not persuasive.

In regards to your first argument,

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In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Furthermore applicant's argument suggest that rigid structures are incapable of absorbing at least one of shock, vibration and alignment in the conduit, the structure of McCall is used in flow measurement for fire hydrants, which would receive shock as the flow is initially turned on, otherwise if the unit could not receive such limitations as shock and vibration, the device would not be operable. Therefore the device of McCall inherently meets this limitation.

Applicant argues that the McCall structure teaches away from providing a structure that could absorb at least one of shock vibration or alignment, when the examiner does not actually employ this measurement portion of the device.

Applicant argues that the shape of the connector of Richter '321 would result in a more turbulent flow leaving the connector, when the examiner is using the teaching of the material being flexible which provides greater acoustical impedance.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections

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are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that conduit halves are "improperly sized", the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Applicant's argument with respect to the length of the fluid conduit section being less than 5 times the diameter, is actually found to have been disclosed in column 6, lines 42-44, which would make the length of the non-measurement section 12 of the device about 2.5 times the diameter, substantially less than 5 times the diameter.

Furthermore, the valve can only be placed in one location and that is to join the flanges of the 2 items, the examiner is not using the measurement section of the device of McCall, therefore the reference is not destroyed.

The overly broad recitation to a hydrodynamic shape has been given the broadest reasonable interpretation. Both the base reference and Arnaudeau meet this limitation, it is unclear what the applicant would consider not a "hydrodynamic shape".

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Price whose telephone number is (571) 272-2712. The examiner can normally be reached on 8AM - 5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CP



6 February 2006



Eric Keasel
Primary Examiner
Art Unit 3754